

WHAT IS CLAIMED IS:

- 1 1. A method of printing images at a plurality of print speeds using a single frequency
2 scanning mirror comprising the steps of:
3 providing a moving photosensitive medium;
4 providing a light beam;
5 intercepting said light beam at the reflective surface of said single frequency scanning
6 mirror and redirecting said light beam toward said moving photosensitive medium;
7 oscillating said scanning mirror at said single frequency to sweep said redirected light
8 beam across said moving photosensitive medium;
9 generating digital signals for modulating said provided light beam to produce a
10 multiplicity of image lines to create a selective image, each of said multiplicity of image lines
11 representing a selected number of addressable pixels per a selected unit of measurement;
12 moving said photosensitive medium at a selected speed; and
13 adjusting the number of image lines generated per said selected unit of measurement as a
14 function of said selected speed so as to produce an image with selected proportions.
- 1 2. The method of claim 1 wherein said selected speed is a single fixed speed.
- 1 3. The method of claim 1 wherein said selected speed is one of a plurality of fixed speeds.
- 1 4. The method of claim 1 wherein said step of providing a light beam comprises the step of
2 providing a laser beam.

1 5. The method of claim 1 wherein said moving photosensitive target area is cylindrical-
2 shaped and rotates about an axis through the center of said cylinder.

1 6. A method of printing images at a plurality of print speeds using a single frequency
2 scanning mirror comprising the steps of:

3 providing a moving photosensitive medium;

4 providing a light beam;

5 intercepting said light beam at the reflective surface of said single frequency scanning
6 mirror and redirecting said light beam toward said moving photosensitive medium;

7 oscillating said scanning mirror at said single frequency to sweep said redirected light
8 beam across said moving photosensitive medium;

9 generating digital signals for modulating said provided light beam and for controlling
10 addressable pixels comprising an image line, said digital signals generated at a rate based on said
11 addressable pixels having a fixed horizontal dimension;

12 generating a multiplicity of said image lines based on said addressable pixels having a
13 selected vertical dimension; and

14 adjusting said vertical dimensions of said addressable pixels as a function of said selected
15 speed so that said printed image has selected proportions.

1 7. The method of claim 6 wherein said selected speed is a single fixed speed.

1 8. The method of claim 6 wherein said selected speed is one of a plurality of fixed speeds.

1 9. The method of claim 6 wherein said step of providing a light beam comprises the step of
2 providing a laser beam.

1 10. A method of producing images at a plurality of rates using a single frequency scanning
2 mirror comprising the steps of:
3 intercepting a light beam at the reflective surface of a single frequency scanning mirror
4 and redirecting said light beam toward a photosensitive target;
5 oscillating said scanning mirror at said single frequency to sweep said redirected light
6 beam across said photosensitive target;
7 generating digital signals for modulating said light beam to produce a multiplicity of
8 image lines to create a selected image, each of said multiplicity of image lines representing a
9 selected number of addressable pixels per a selected unit of measurement;
10 providing relative motion between said target and said sweeping redirected light beam,
11 said motion being substantially orthogonal to said sweeping beam and at a selected speed;
12 adjusting the number of image lines generated per said selected unit of measurement as a
13 function of said selected speed so as to produce an image with selected proportions.

1 11. The method of claim 10 wherein said produced image is a printed image and wherein
2 said relative motion between said photosensitive target and said sweeping light beam is provided
3 by moving said photosensitive target.

1 12. The method of claim 11 wherein said moving photosensitive target is a rotating drum.

1 13. The method of claim 10 wherein said produced image is an image on a photosensitive
2 screen and wherein said relative motion between said photosensitive screen and said sweeping
3 redirected light beam is provided by moving said sweeping beam orthogonally with respect to
4 said photosensitive screen.

1 14. The method of claim 10 wherein said step of providing relative motion at a selected
2 speed comprises the step of providing said relative motion at a single fixed speed.

1 15. The method of claim 10 wherein said step of providing relative motion at a selected
2 speed comprises the step of providing said relative motion at a multiplicity of fixed speeds.

1 16. Apparatus for generating a modulated scanning beam for driving a printer having a
2 moving photosensitive medium sensitive to said modulated scanning beam:
3 a single frequency scanning mirror for intercepting a light beam and redirecting said light
4 beam toward said moving photosensitive medium;
5 drive circuitry for oscillating said scanning mirror at said single frequency to sweep said
6 redirected light beam across said moving photosensitive beam;
7 circuitry for generating a multiplicity of image lines which combine to form a selected
8 image, each of said multiplicity of image lines comprised of a selected number of addressable
9 image pixels per a selected unit of measurement;
10 circuitry for generating said multiplicity of image lines at a selected rate, said rate
11 determined as a function of the speed of movement of said photosensitive medium so as to
12 produce a printed image with selected proportion.

1 17. The apparatus of claim 16 wherein said moving photosensitive medium is a rotating
2 photosensitive drum.

1 18. An apparatus of claim 16 wherein said scanning mirror is pivotally supported by a first
2 pair of torsional hinges.

1 19. An apparatus for generating a modulating scanning beam for producing an image
2 comprising:
3 a photosensitive screen;
4 a single frequency scanning mirror for intercepting a light beam and redirecting said light
5 beam toward said photosensitive screen;
6 drive circuitry for oscillating said scanning mirror at said single frequency to sweep said
7 redirected light beam across said moving photosensitive screen;
8 circuitry for generating a multiplicity of image lines which combine to form a selected
9 image on said photosensitive screen, each of said multiplicity of image lines comprised of a
10 selected number of addressable image pixels per a selected unit of measurement;
11 apparatus for moving said sweeping light beam at a selected speed and in a direction
12 orthogonal to said light beam sweeping across said photosensitive screen; and
13 circuitry for generating said image lines at a selected rate determined as a function of said
14 selected speed of said orthogonal movement so as to produce an image on said photosensitive
15 screen with selected proportions.